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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,485	08/01/2003	Paul J. Cahill	7613-90318	3000

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EXAMINER

ZEMEL, IRINA SOPJIA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,485

Applicant(s)

CAHILL, PAUL J.

Examiner

Irina S. Zemel

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

The restriction requirement is withdrawn in view of the amendments to the claims made by the applicants in the response dated 10-28-2005.

Claim Objections

Claims 7 and 17 is objected to because of the following informalities: Claim 7 contains a clause "bottle-cups" which appears to be a misspelled (omitted) word, while claim 17 contains a misspelled word "mil" (probably, instead of "milk"). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4 , 14-16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Both claims 4 and 19 recite a monomer selected from the rubber products. Those claims make no sense and are confusing to what exactly is being claimed. Claims 4 and 19 are not further treated on the merits pending clarification of their meaning and bounds of the claimed subject matter.

Claims 14-16 recite "Hytrel" or "Hytrel-type" binders. Since Hytrel is a trademark designation of a product, recitation of a trademark is not appropriate in a claim as the scope of the claimed product is not defined with sufficient specificity.

Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2 6,7, 8, and 9 are rejected under 35 U.S.C. 102(9) as being anticipated by US patent 5,128,202 to Subramanian et al., (hereinafter "Subramanian").

Subramanian discloses compositions containing recycled polyethylene terephthalate (PET) and a polyolefin based elastomer and foamed products obtained from such a composition (which also contains a blowing agent as per claim 8). The reference expressly lists recycled PET bottles as suitable recycled material (paragraph bridging column 2 and column 3). The reference also expressly lists polyethylene/polypropylene polyolefins as suitable components of the compositions, thus anticipating limitation of claim 6. The reference expressly discloses foamed products such as planks and pallets.

The invention as claimed, thus, is fully anticipated by the disclosure of the the cited reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5, 10-13, 17, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over combined teaching of Subramanian and US patent 5,397,825 to Segrest (hereinafter "Segrest").

The disclosure of Subramanian is discussed above. The reference does not disclose addition of styrene-butadiene or other recycled rubbers to its composition. However, addition of recycled tire rubbers to the PET based composition would have been obvious in view of disclosure of Segrest who expressly teaches addition of recycled tyre rubbers to PET based compositions to improve a number of properties including tensile strength, elongation at break and paitability. See illustrative embodiment 1 (columns 6-7) for example 1 and the entire disclosure of the Segrest reference.

Therefore, the invention as claimed would have been obvious from the combined teachings of the two cited references.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sibramanian in combination with Sagrest and further in view of "Chain Extension of Recycled Poly(ethylene terephthalate) with 2,2'-Bis(2-oxazoline) by Cardi et al., (J. Appl. Polymer Science, 1993), hereinafter "Cardi") and either one of US 4,632,962 to Gallucci (hereinafter "Gallucci") or US 5,811,493 to Kent (hereinafter "Kent").

The disclosure of Suramanian and Segrest is discussed above. The references do not disclose addition of the chain extender/hydrolytic agent to the compositions based on recycled PET. However, addition of chain extender/hydrolytic agent such as 2,2'-Bis(2-oxazoline) to the compositions based on recycled PET and in the claimed amounts would have been obvious in view of the disclosure of Cardi, which expressly teaches that such addition greatly improves rheological characteristics, and, thus processability of recycled PET absent showing of unexpected results. Addition of compatibilizers to compositions comprising polyester (such as PET) and polyolefins is well and notoriously known in the art as evidenced by the disclosures of, for example, Kent or Gallucci. Thus addition of compatibilizers such as Hytrel-type polyesters and PDS polyesters and/or maleated polyolefins to compositions of Subramanian containing PET and polyolefins in the amounts claimed by the applicants would have been clearly obvious for an ordinary artisan to improve compatibility of the blends and all of the properties associated with compatibilized (as opposed to phase separated) blends in the absence of unexpected results that can be clearly attributed to the presence of the claimed compatibilizing agents.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Subramanian in combination with US patent 6,132,840 to Lee (hereinafter "Lee").

The disclosure of Subramanian is discussed above. The reference does not disclose specific articles made from the foamed compositions, but expressly states that the compositions are useful for a variety of bulky objects, and is also suitable for any application where recycled PET is used. As per disclosure of Lee, it is known to make

railroad support members (or railroad ties) from recycled Pet/rubber compositions, thus it would have been obvious to produce a railroad tie from the compositions of Sibramanian based of recycled PET/rubber with reasonable expectation of adequate results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina S. Zemel whose telephone number is (571)272-0577. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571)272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ISZ

Irina S. Zemel
Examiner
Art Unit 1711

